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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
NELSON, MICHAEL B				
ART UNIT		PAPER NUMBER		
1794				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/519,098

Applicant(s)

FLEURY ET AL.

Examiner

MICHAEL B. NELSON

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-9,13-15,19-21 and 23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,13-15,19-21 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10/17/08.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on 10/17/08 has been entered. Claims 3, 10-12 and 16-18 are cancelled, claim 22 is withdrawn and claims 1, 2, 4-9, 13-15, 19-21 and 23 are currently under examination on the merits. Applicant's confirmation of the restriction requirement is acknowledged. Applicant's amendments have negated certain objections and 112 2nd paragraph rejection; however, some of the claims remain at issue (see below). Applicant's notice as to a typographical error in the double patenting rejection of the previous office action is confirmed and thanked.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claim 8, the phrases "preferably" renders the claim indefinite because it is unclear whether the limitation(s) following the phrases are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 4-9, 13-15, 19-21 and 23 rejected under 35 U.S.C. 102(b) as being anticipated by Joret et al. (FR 2,800,998), see English language equivalent U.S. 6,924,037.

Regarding claim 1, Joret et al. discloses a transparent substrate, comprising on at least one of its faces an antireflection coating, particularly at normal incidence made of a multilayer (A) of thin layers made of dielectrical material with alternatively high and low refractive indexes, characterized in that the multilayer comprises, in succession: a high-index first layer (1), with a refractive index n_1 of between 1.8 and 2.2 and geometrical thickness of between 5 and 50 nm, a low-index second layer (2), with a refractive index n_2 of between 1.35 and 1.65 and a geometrical thickness e_2 of between 5 and 50 nm, a high-index third layer (3) with a refractive index n_3 of between 1.8 and 2.2 and a geometrical thickness e_3 , a low-index depth fourth layer (4) with a refractive index n_4 and a geometrical thickness e_4 ;

(See Abstract and claim 1 of Joret et al. All the limitations are read upon practically verbatim with only the third and fourth layer thickness ranges not exactly matching. The disclosed third layer thickness (70-120 nm) substantially covers the claimed range with both endpoints lying within the claimed range. The disclosed fourth layer thickness (at least 80 nm) substantially covers the claimed range with the lower endpoint (80 nm) lying within the claimed range. Joret et al. discloses that the materials for the first and third layers can be more than one oxide (i.e. a mixed oxide) selected from a group containing ZnO and SnO, (C4, L32-38).)

Regarding claims 2, 4-7, Joret et al. discloses all of the limitations as set forth above. Additionally the reference discloses a transparent substrate which reads on the limitations of claims 2, 4-7

(See C3, L65-C4, L15, the disclosed ranges exactly match the ranges of instant claims 2, 4 and 5. The lower endpoint of the most preferred disclosed thickness of the third layer (at least 75 nm), lies within the claimed range of instant claim 6. The endpoints of the most preferred thickness of the fourth layer (80-110 nm), lie within the claimed range of instant claim 7. See Abstract, the disclosed range for the second and third layer refractive indexes exactly matches the limitations of instant claims 3.)

Regarding claims 8 and 9, Joret et al. discloses all of the limitations as set forth above. Additionally the reference discloses a transparent substrate wherein

- wherein the high-index first layer (1) and the low-index second layer (2) are replaced by an intermediate-index single layer (5) n_s of between 1.65 and 1.80 and preferably having an optical thickness e_{opt5} of between 50 and 140 nm, preferably between 85 and 120 nm.
- wherein the intermediate-index layer (5) is based on a mixture of, on the one hand, silicon oxide and, on the other hand, at least one metal oxide chosen from tin oxide, zinc oxide, titanium oxide or is based on a silicon oxynitride or oxycarbide and/or aluminum oxynitride.

(See C4, L15-35. The first and second layers are disclosed as being combined into an intermediate layer having exactly the same thickness and refractive index as the claimed ranges. The same materials for the intermediate layer are also disclosed.)

Regarding claim 13, Joret et al. discloses all of the limitations as set forth above. Additionally the reference discloses a transparent substrate which reads on the limitation of claim 13.

(See C4, L30-40, the materials for the first and third layers are, inter alia, silicon nitrides, as in instant claim 10. See C4, L60-C5, L5, the first or the third layers are disclosed as being made of $\text{SnO}_2/\text{Si}_3\text{N}_4$ or $\text{Si}_3\text{N}_4/\text{SnO}_2$ bilayers. See C5, L15-30, the second and fourth layers are disclosed as being made of, inter alia, silicon oxide. See C5, L5-15, the substrate is disclosed as being made of, inter alia, clear glass.)

Regarding claims 14 and 15 Joret et al. discloses all of the limitations as set forth above. Additionally the reference discloses a transparent substrate which reads on the limitations of claims 14 and 15.

(See Examples 1-13, C13, L5-20, the reflectance of example 4 is 3% less than that of the uncoated substrate, (example 1, C9, L35-45) and the b^* value is negative and in claims 14 and 15. See C4, L30-40, the materials for the first and third layers are, inter alia, silicon nitrides, which is disclosed as giving the invention heat treatment abilities (C15, L35-40). See C13, L20-30, the disclosed TABER test results of the examples are less than 3%, as in claims 16 and 17.)

Regarding claims 19-21 and 23, Joret et al. discloses all of the limitations as set forth above. Additionally the reference discloses a transparent substrate which reads on claims 19-21 and 23.

(See C6, L40-55, a multiple glazed unit is disclosed with two glass substrates with a thermoplastic PVB layer in between and with the disclosed four layered antireflective structure (A) on one side and on the other side a different antireflective structure (B), which is disclosed as meeting the limitations of the first embodiment of the second antireflective coating from instant claim 20 (i.e. single low-index layer of silicon oxide with the instant claimed refractive index ranges deposited by CVD, C7, L35-C8, L10). Also see C5, L25-35, a disclosed use of the substrate is for a shop counter.)

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 2, 4-9, 13-15, 19-21 and 23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-37 of U.S. Patent No. 6,924,037. Although the conflicting claims are not identical, they are not patentably distinct

from each other because where the claimed ranges differ (i.e. the thickness ranges for the third and fourth layers in the stack structure), there is substantial overlap between the two sets of claimed ranges to the point that one of ordinary skill in the art would not see the claimed inventions as patentably distinct from one another. The added limitations of instant claim 1 are also present in claim 8 of 6,924,037.

9. Claims 1, 2, 4-9, 13-15, 19-21 and 23 are provisionally rejected on the ground of nonstatutory double patenting over claims 24, 27-30, 33-36, 41-47, 74-79 of copending Application No. 10/296,410 (both have the same assignee). This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: Although the conflicting claims are not identical, they are not patentably distinct from each other because where the claimed ranges differ, there is substantial overlap between the two sets of claimed ranges to the point that one of ordinary skill in the art would not see the claimed inventions as patentably distinct from one another. The added limitations of instant claim 1 are also present in claim 33 of 10/296,410.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Response to Arguments

Applicant's arguments filed on 10/17/08 have been considered but are no persuasive. Regarding the arguments that Joret et al. does not disclosed a mixed oxide composition for its first and third layers, Joret et al. does in fact disclose such a mixed oxide composition. Joret et al. discloses that the materials for the first and third layers can be more than one oxide (i.e. a mixed oxide) selected from a group containing ZnO and SnO, (C4, L32-38).

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MN/
11/13/08

/Carol Chaney/
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